

Title (en)  
PROPENE PRODUCTION METHOD

Title (de)  
PROPENHERSTELLUNGSVERFAHREN

Title (fr)  
PROCÉDÉ DE PRODUCTION DE PROPÈNE

Publication  
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Application  
**EP 13897037 A 20131108**

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Abstract (en)  
The present invention relates to a process for the production of propene from a mixture of alcohols obtained from at least one renewable source of carbon, comprising the following steps: (a) fermentation of at least one renewable source of carbon for the production of a mixture of alcohols comprising ethanol, isopropanol and 1-butanol; (b) simplified removal of the alcohols from the fermentative wort to generate an aqueous solution containing chiefly ethanol, isopropanol and 1-butanol; (c) joint dehydration of the alcohols to produce a mixture of olefins comprising chiefly ethene, propene and linear butenes, the linear butenes being a mixture of 1-butene and 2-butenes (cis and trans isomers), besides water and by-products, among which oxygenated compounds; (d) removal of water, oxygenated compounds and other by-products to generate a mixture of olefins comprising chiefly ethene, propene and linear butenes; and (f) passing the mixture of olefins through an isomerized bed, so that 1-butene will be isomerized to 2-butenes and, subsequently, passing the mixture of olefins comprising chiefly ethene, propene and 2-butenes through a metathesis bed, for reaction between ethene and 2-butenes, generating additional propene, the molar ratio ethene:linear butenes being corrected to be between 1:1 and 1.3:1, by means of one of the alternatives selected from the group comprising: (i) addition of a stream containing ethanol to the process in step (c); (ii) addition of a stream containing ethene to the process in step (e); (iii) addition of a stream containing ethanol to the process in step (c) and a stream containing ethene in step (e).

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Cited by  
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